

DEPARTMENT OF TRANSPORTATION
ADMINISTRATIVE SERVICES DIVISION
1401 EAST BROAD STREET
RICHMOND, VA 23219

NOTICE OF CONTRACT AWARD

1. DATE.....March 22, 2006
2. COMMODITY NAME.....Tractor with Brushcutter
3. CONTRACT NUMBER.....**VAPP 23197**
4. CONTRACT PERIOD.....March 15, 2005 through March 14, 2007
(With 3 one-year renewals possible)
5. AUTHORIZED USERS.....State Agencies and Other Public Bodies
6. CONTRACTORS FIN NUMBER.....74-2494182
7. CONTRACTOR.....Alamo Sales Corp.
1502 East Walnut St.
Seguin, TX 78155
8. CONTRACTOR CONTACT PERSON.....Brian Dunleavy
9. CONTRACTOR'S PHONE NUMBER.....(830) 305-2295
FAX NUMBER (865) 693-0436
10. PRICES AND OPTIONSSee attached
11. DELIVERY.....120 Days
12. FOR FURTHER CONTRACT INFORMATION CONTRACT:.....Caroline Hudgins
(804) 786-2725
13. FOR ADDITIONAL COPIES OF THIS AND OTHER CONTRACTS AND ANY
ASSOCIATE CONTRACT CHANGES, CALL (804)-786-2725.

INSTRUCTIONS

1. Orders: Unless otherwise instructed by the Department of Transportation, institutions and agencies of the Commonwealth of Virginia may order items listed by issuing agency purchase orders (Form DPS-41-056) or by issuing their own purchase order form. Please forward copy of order to VDOT. – FAX – 804-225-4292 – ATTN: Caroline Hudgins
2. Virginia cities, counties, towns and political subdivisions may use their own form to order items listed in this contract
3. The applicable contract number, federal employer identification number (FIN) and item number (for itemized contracts) must be shown on each purchase order and copy.
4. Inspection on delivery or equipment and approval of vendor's invoice is the responsibility of receiving State Agency, Virginia City, county, town or political subdivision.
5. Any complaint as to quality faulty or delinquent delivery, or violation of contract provisions by contractor shall be reported to the Department of Transportation for handling with the contractor. Preprinted forms (DGS-41-024), by which to facilitate the notification of the contractor and this office of complaints, are available from the Division of Purchases and Supply (786 -3522)
6. SPECIFICATIONS: See Attached

**TRACTOR(85 HP) WITH SIDE MOUNTED BRUSHCUTTER
PRICE AND OPTION DATA**

**Base Unit Cost - \$60,765.30 + 2% = \$61,980.61 Make & Model – John Deere 6420
w/ Alamo Machete Mower**

OPTIONS:

	Price
Rotary Cutter Head 60” Boom Axe	\$8,525.90 + 2% Fee = \$8,694.42
Four-Wheel Drive	\$5,431.82 + 2% Fee = \$5,540.46
23’ Reach A-Boom	\$1,181.77+ 2% Fee = \$1,205.41
38” Flail Shredder Head(for use only w/21’ Reach Boom	\$7,735.19 + 2% Fee = \$7889.89
60” Flail Grass Cutter Head	\$8117.65 + 2% = \$8280.00
4” Limb Cutting Timbercat Sickle Type Limb Cutting Head	\$6,591.03 + 2% = \$6,722.85
Circular Saw Limb Cutting Head Buzz Bar	\$9,017.94 + 2% = \$9198.30
Quick Coupler Both Halves Quick Hitch	\$1,192.51 + 2% = \$1,216.36
Quick Coupler Mower Head Half	\$285.77 + 2% = \$291.49
* 2% VIRGINIA PARTNERS IN PROCUREMENT SURCHARGE MUST BE ADDED TO TOTAL ORDER.	
Powertrain Warranty – 2WD Tractor – 3 years	\$1,781.57 + 2% = \$1,817.20*
Powertrain Warranty – 4WD Tractor – 3 years	\$2,138.29 + 2% = \$2,181.06*
*Prices will be discounted 20%	
Mower – Full Warranty	
3 years -	\$1,555.50 + 2% = \$1,586.61
4 years -	\$2,074.00 + 2% = \$2,115.48
5 years -	\$2,592.50 + 2% = \$2,644.35

MSRP DISCOUNT FOR OPTIONS NOT INCLUDED ON CONTRACT – 15% - 2% fee = 13%



VIRGINIA DEPARTMENT OF TRANSPORTATION

SPECIFICATIONS

Tractor with Extra Heavy Duty Side Mounted Brushcutter

General: It is the intent of these specifications to purchase an industrial series tractor with an extra heavy duty side mounted articulated arm brushcutter suitable for mowing highway right of way and cutting heavy brush. The tractor and mower are to be matched in size to provide a properly operating, balanced unit.

Option List: These specifications contain various options for purchase at the time the units are ordered.

Bidders shall quote the additional cost or price deduction for each option as applicable to the base specifications of the tractor and mower.

Bidder must provide the same make and model tractor and mower as bid in the base specifications except for changes necessary to comply with the options.

BASE SPECIFICATIONS - TRACTOR

Weight: The tractor furnished must weigh a minimum of 8,100 lbs. No counterweight or hydro-inflation may be used to meet weight requirement. Brushcutter is not a part of this weight.

Wheelbase: The tractor furnished is to have a minimum wheelbase of 92". No wheelbase extensions or modifications may be used.

Engine: The tractor is to be powered by a water-cooled diesel engine having at least 4 cylinders, 244 cubic inch displacement and rated at not less than 83 PTO horsepower. Engine is to be equipped with air filter, oil filter, fuel filter, governor, electric starter, alternator/generator, battery, muffler and cold weather starting aid.

Engine coolant is to be ethylene glycol type antifreeze meeting the requirements of TMC RP-329 (fully formulated, low silicate, nitrite containing) mixed 50-50 with water. Antifreeze is to be on the current Penray® Fill-For-Life program approved list.

If exhaust is vertical, a rain cap or deflecting elbow is to be furnished.

Tractor with Extra Heavy Duty Side Mounted Brushcutter

Transmission: The transmission is to have at least 16 forward and 8 reverse speeds. The transmission is to have 4 forward powershifts in each range. Tractor is to include a creeper gear option to provide a ground speed of not more than 0.5 MPH at normal operating RPM.

Clutch: Clutch is to be multiple wet disc type.

PTO & Three-Point Hitch: The PTO is to be 540/1000 RPM, 1-3/8" spline, fully independent, hydraulically activated. To include a shield.

The three-point hitch is to be hydraulically controlled, Category II. It is to include sway bars and swinging drawbar.

Tires & Drive Train: The tractor is to be equipped with not less than 7.50 x 16, 6 ply rating, F3 tread tires on front axle. In lieu of above, tires may be no less than 7.50 x 16 or LT235/85R16, load range E, truck type tires on front axle. Tires to be Goodyear Unisteel G159, Michelin XPS, or an equal tire with full steel casing and steel belts.

Front axle is to be maximum capacity heavy duty unit available from the manufacturer for highway work. It is to be equipped with power steering.

Rear tires are to be minimum 18.4-34, 6 ply rating, R1 tread.

Rear axle is to have a differential lock.

It is desired to have the tractor sit level. Alternate tire sizes and tread design *may* be allowed provided the Asset Management Division/Equipment Section approves these. *Contact the Asset Management Division/Equipment Section at 804-236-3589 for approval.*

Brakes: The tractor is to be equipped with hydraulically operated wet disc brakes, independently operated, acting on rear wheels.

Cab: The tractor is to have a factory installed cab. It is to include safety glass, heater/defroster, factory installed air conditioner, front windshield wiper, inside rearview mirror, and ROPS structure as required by OSHA. Cab is to have flat deck design.

Instrument panel is to include tachometer, hourmeter, engine temperature indicator, oil pressure indicator, and charging system indicator.

Operator's seat is to be spring suspension type, fully upholstered, with either operator back and arm rests or be wrap around design. It is to include a seat belt.

Miscellaneous: Tractor lighting is to include at least two headlights, taillights, turn signals, and two amber flashing warning lights visible to both front and rear.

Tractor with Extra Heavy Duty Side Mounted Brushcutter

The tractor is to be equipped with right and left outside mirrors.

A slow-moving vehicle emblem is to be affixed to rear of tractor.

Cab side (door) on mower side is to have a window in the lower portion near floor to provide adequate visibility for the operator.

Windows on the mower side of the tractor are to be covered with minimum ¼" thick clear polycarbonate sheet (Lexan® or equal). To be mounted in metal framework or rubber grommets and be hinged at the top or on one side, and have latches or thumbscrews on the side opposite the hinge to provide access for the operator to clean the windows.

A front bumper/grille guard is to be furnished on the tractor. It is to protect the front of the hydraulic pump and at least 4" elevation below the pump.

All attachments and accessories are to be mounted on the tractor so as not to create a safety hazard for the operator or interfere with accessibility to air, oil and fuel filters, other normal service requirements, and normal operations.

Stability: Wheel weights for the rear wheel opposite the mower are to be supplied as required for stability of unit. The unit will be considered stable when, while on level ground with the mower at maximum reach and 3' above ground level, a 300 lb. weight can be placed on the mower deck and the rear tire opposite the mower maintains contact with the ground.

BRUSHCUTTER

General: The brushcutter is to be a hydraulically operated articulated arm type and include necessary pump, motor, cylinders, control valves, relief valves, reservoir, filter, hoses and fittings. Mower shall be mounted by mower manufacturer at their manufacturing facility to insure uniformity and quality of the installation.

Mounting Frame: Framework for mounting to the tractor shall be minimum 4" x 4" x 3/16" saddle mount main frame over the hood of the tractor. It is to be connected to minimum 4" x 4" x ¼" tube frame rails mounted to the front axle mounting frame and rear axle of the tractor.

King Post: The king post shall have two heavy duty 2-1/2" ID impregnated bearings with 2-1/2" diameter chrome plated pins. Minimum bearing area is to be 59 square inches. The thrust washer is to be 5" diameter x ¼" thick.

Extension Arm: The extension arm is to be mounted on right side of tractor between front and rear wheels.

Tractor with Extra Heavy Duty Side Mounted Brushcutter

Horizontal reach from centerline of tractor is to be minimum 21'.

Arm is to be an articulated type with inner section of not less than 6" x 6" x 1/4" square steel tubing. Outer section is to be not less than 5" x 5" x 1/4" square steel tubing. Both boom sections and all reinforcements are to be minimum 50,000 psi yield strength steel.

All hinge points of the arm and mast are to have 1-1/2" steel pins with replaceable impregnated bearings. Hinge points are to be reinforced with T-1 steel.

Hydraulic Controls: All functions of the extension arm and cutter head are to be controlled from the operator's cab. Control is to be joystick type, mounted so that the operator can comfortably reach it while sitting in the tractor seat with the seat belt fastened.

Controls are to be furnished for all hydraulic functions, including 125° arm swing, arm lift, arm articulation, 205° cutter head tilt and cutter head on-off. Hydraulic control valve shall be a five spool, electrically operated, proportional, pressure compensating type. Valve to be located outside the cab. Any wiring harness or cable that runs through the cab wall is to be weatherproofed with appropriate size grommets or rubber boots.

Hydraulic System: Hydraulic power for cutter head must be separate from the tractor hydraulics. Hydraulic power for the boom control functions may be either from the tractor hydraulics or from a separate pump section of the front mounted pump. If tractor hydraulics are used, the mower manufacturer shall supply an appropriate valve bank for operation. Hydraulic pump is to be a piston type. Pump is to be front mounted, driven by the engine crankshaft. Pump shall be rated at 46 GPM at 3600 RPM and 5000 psi.

The hydraulic reservoir is to be at least 17 gallon capacity. Adequate clearance must be provided for operator to enter and exit the cab.

A return line filter is to be mounted in the top of the tank. It shall be 10 micron or better, rated at not less than the maximum flow of the system and include a restriction indicator. A 100 mesh suction line strainer shall be included. An oil temperature gauge shall be installed in the reservoir.

System is to be designed so that during continuous use the oil temperature remains less than 100° above ambient.

The hydraulic cylinder for swing is to have hydraulic "breakaway" relief to protect the unit in the event the cutter head or arm meets an obstruction.

Hydraulic lines on inner and outer boom sections are to be steel tubing except at articulation points. Hoses at articulation points on boom, and other locations where abrasion is likely to occur, shall be protected by abrasion resistant covers.

Interlocks: The tractor is to be equipped with an interlock system which prevents the tractor from being started if the cutter head section is engaged.

Miscellaneous: A suitable cradle shall be supplied for boom storage.

OTHER SPECIFICATIONS

General Workmanship: All workmanship shall be in accordance with good commercial practices. All cutting, drilling and machining are to be finished so that edges are smooth. Hand cutting by torch is not acceptable. Welds shall be finished to insure satisfactory appearance of the completed unit.

Paint: The tractor and mower shall be manufacturer's standard color.

Electrical Workmanship: Any electrical components added to the equipment by the original equipment manufacturer, selling dealer, body company, or aftermarket supplier shall use the best practices of the industry. Absolutely no Scotchlok™ or similar quick connectors shall be used in the electrical wiring.

A properly designed circuit with a fuse or circuit breaker for protection shall be provided. External (outside of cab) electrical connections and wiring shall be in weatherproof enclosures or inside surface mount plastic junction boxes with covers. Junction boxes to be Betts Part #470041 or approved equal. To have internal terminal block for wiring junctions. To use compression fittings on jacketed cable, or accept plastic conduit (not vinyl tubing), to make a weatherproof seal.

Internal (inside of cab) electrical connections and wiring shall be in a protective enclosure to prevent accidental damage.

All wire ends (both external and internal) shall be fitted with the proper size spade, lug or ring terminals. Terminal to wire connection shall be properly crimped and/or soldered and protected with proper heat shrink tubing. All spade terminals or pin type wire connections shall be coated with a corrosion preventative compound, similar to Truck-Lite's NYK-77, designed for use with electrical switches, contacts and terminals.

Correctly sized grommets are required to protect wires wherever they run through panels. If panel separates interior and exterior surfaces, it shall also provide a weathertight seal. A grommet shall be provided even if it is necessary to use additional sealer to make the area weathertight.

Advertisement: No stickers, decals, or plates displaying dealer or distributor name or logo shall be affixed to equipment. Manufacturer plate with model and serial number is to be on the equipment.

Warranty: The complete unit (tractor and attachment) is to be warranted for a minimum period of 24 months from the date it is placed in service by VDOT. Warranty is to include all items covered under the manufacturer's standard warranty. Wear items such as blades, guards, etc., are excluded. The manufacturer shall agree to replace any parts that fail during normal use. Warranty repairs for the tractor are to be performed by any authorized dealer of the manufacturer. Warranty repairs for the attachment are to be performed either by the manufacturer at the VDOT location of the unit, by any authorized dealer of the manufacturer or by VDOT personnel with labor charges billed to the manufacturer. The method chosen is to be by mutual agreement of the VDOT District Equipment and Facilities Manager, VDOT Equipment Division and the manufacturer.

Any forms required for updating warranty start dates are to be delivered to the VDOT District Equipment and Facilities Manager at the time the unit is delivered. A copy of any extended warranties for all components, including but not limited to engines, driveline components, chassis, and cab components, shall be provided to the VDOT District Equipment and Facilities Manager. All forms must be received before the unit will be accepted for payment.

Spare Filters: Each machine delivered is to include one spare filter for each system (air, fuel, engine oil, hydraulic, etc.) on the machine. Filters are to be boxed and labeled for each receiving location. Shipping loose in the cab of the machine is not acceptable. All filters must be received before the unit will be accepted for payment.

Delivery: Equipment shall be delivered to District Headquarters locations listed in the Request for Quote (RFQ). Unit to be fully assembled and ready to operate, and all training, forms, and other items required by this specification must be furnished, before being accepted for payment by VDOT.

Equipment shall be delivered on a trailer with the capability of having the unit unloaded directly from the trailer without the aid of a loading ramp. VDOT personnel will not be obligated to unload any equipment delivered on a trailer requiring a loading ramp.

Deliveries will be accepted only between the hours of 8:30 a.m. and 4:00 p.m. on regular workdays. No deliveries will be accepted on weekends or state holidays.

Pilot Model: A pilot model will be required. It will be inspected and then placed in service for a minimum of three working days. Upon satisfactory operation, approval to ship the remaining units will be given by VDOT's Equipment Division. NOTE: The pilot model is to be delivered to a district location specified by VDOT's Asset Management Division, Equipment Section. Contact the Assistant Director for Equipment Management's office at (804) 236-3649 to schedule delivery. The district locations will not accept delivery of any units until the pilot model has been approved.

Operation and Maintenance Instruction: A manufacturer or dealer representative of both tractor and attachment is to inspect the equipment after delivery and provide technical

instructions on the operation and maintenance requirements for the unit to each district receiving equipment. This must be scheduled with the VDOT District Equipment and Facilities Manager. The manufacturer/dealer furnishing the equipment must agree to allow these instructional sessions to be videotaped by VDOT to be used for future instructions for VDOT personnel. This instruction must be performed before the unit will be accepted for payment, unless waived by VDOT.

Current Model: Equipment is to be a standard proven model of manufacturer's latest current production and include all standard equipment as advertised with additional optional equipment outlined herein. All components, unless otherwise required by these specifications, shall be the standard or optional equipment specifically advertised and installed by the manufacturer. Manufacturers of the units supplied must have been in the business of producing operational units for at least five years. The model furnished must have been in production and in use by customers for at least two years, or be the latest version of a previous model. Bidder should be prepared to provide documentation to VDOT that within the previous three years at least 100 units representative of the make and model bid have been sold in the United States. A list of owners and their telephone numbers may be requested.

Bid Literature: Descriptive literature will be required to substantiate the details specified in bid.

Equipment Data Sheet: Upon receipt of order, successful bidder will be furnished an "Equipment Data Sheet" requesting details of unit being furnished. It is to be completed and returned to the VDOT Asset Management Division within six calendar weeks after receipt. Unit delivered must be in accordance with information furnished on the Equipment Data Sheet unless otherwise approved by the Asset Management Division.

NOTE: The Equipment Data Sheet must be completed and returned by mail to the VDOT Asset Management Division, Equipment Section, 1401 East Broad Street, Richmond, VA, 23219, or by fax to (804) 236-3609, before unit(s) will be approved for payment.

Manuals and Parts Lists: Successful bidder shall furnish one operator's manual, one shop service manual, and one parts list in CD-ROM or microfiche for each unit delivered. If microfiche, parts lists to be 4" x 6" cards, positive or negative, 24X or 42X magnification. All manuals and parts lists under any circumstances must be congruent with the unit delivered and shall include information on all components and items furnished. Additionally, shop service manual information may be provided by allowing access by all VDOT shop locations to the manufacturer's website containing service manual information.

Shop service manuals are to be provided for all components and systems of the unit, including mechanical, hydraulic, electrical, emissions, and any computer controlled systems that require programming for repair or operation. These are to include the engine, transmission, and driveline components.

Two additional copies of operators' manuals, shop manuals and parts lists are to be delivered to each receiving district. **Two additional** copies of operators' manuals, shop manuals, and parts lists are to be delivered to each receiving district.

Technical Service Bulletins: Successful bidder shall provide technical service bulletins (TSBs) for all equipment delivered to a VDOT district location for a period of five years from the date of delivery. TSBs may be furnished in paper format, on CD-ROM updated regularly, or by allowing access to the manufacturer's website containing TSBs by all VDOT shop locations. VDOT personnel will monitor receipt of TSBs and annually contact the vendor/manufacturer if no TSBs are received.

Technician Training: The successful bidder agrees to conduct training sessions developed specifically for VDOT's equipment repair technicians. The training will be scheduled through VDOT's contracted training coordinator, ManTech Systems Engineering Corporation. Bidder shall provide the name and telephone number of the equipment manufacturer's training representative in the blanks at the end of this section. Training is to be performed, as determined by VDOT, approximately six to twelve months after the last unit is placed in service by VDOT. Training topics will be determined by VDOT and communicated to the manufacturer's training representative by ManTech. A list will be sent to the manufacturer's training representative detailing any problems VDOT has encountered with the equipment. Training shall include complete diagnosis and repair of the listed problems as well as detailed preventive maintenance procedures (A, B, C, & D levels) and discussion of any problems or updates known by the manufacturer. ManTech will send the list to the manufacturer two months prior to the scheduled training date.

One training session will be scheduled in each district (at the district equipment section location) that received the equipment. The maximum number of training sessions required per year would be ten. For renewable term contracts, training sessions will be required each year orders are placed from the contract.

Training sessions will include a minimum of 16 hours (two eight-hour days) of training.

Manufacturer's Training Representative

Name: _____

Telephone Number: _____

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OPTIONS

Option 1 – Rotary Cutter Head: The cutter head is to be a hydraulically operated, heavy duty rotary type with minimum 60" cutting width. It shall be capable of routinely cutting heavy brush up to 5" in diameter without equipment failure.

Tractor with Extra Heavy Duty Side Mounted Brushcutter

Deck material is to be minimum 10 gauge alloy steel with adequate bracing. Side skirts are to be minimum 3/8" thick steel and have full length, replaceable, steel skid shoes. Mounting plate for drive motor is to be cast steel or 1/2" thick steel plate.

Drive spindle is to be minimum 4-1/2" diameter heat-treated H-11 alloy steel and be supported by tapered roller bearings, 2-1/2" ID top and 2-5/8" ID bottom. Hydraulic motor to spindle connection shall be splined and totally enclosed.

Blade carrier shall be three leaf bar type, with bottom leaf T-1 steel. Mower is to be furnished with two free swinging heat-treated alloy steel blades, minimum 5/8" thick and 5" wide, sharpened on at least two sides.

Cutter head shall have a hydraulically retractable guard on leading edge of the cutter. Rear of cutter head shall have a guard made from heavy rubber belting.

The cutter head is to be interchangeable with the other optional heads .

Option 2 - Four-Wheel Drive: Provide tractor model quoted in base specifications with manufacturer's four-wheel drive option.

Option 3 - 23' Boom: Furnish boom with minimum 23' 6" horizontal reach from centerline of tractor in lieu of 21' reach boom in base specifications.

Option 4 - Flail Type Shredder Head: Furnish flail type shredder head conforming to the following specifications.

NOTE: This **cutter head** is to be ordered only with the 21' reach boom in the base specifications.

The flail **mower cutting** head is to be a hydraulically driven heavy duty unit with a cutting width of 38" minimum. It shall be capable of routinely cutting heavy brush up to 6" in diameter without equipment failure.

The housing and frame shall be fully welded steel construction.

It is to be equipped with a rear deflector curtain.

To have 16 heavy duty knives, replaceable type, flexibly mounted to provide a folding action when hard objects are encountered and return to cutting position automatically when clear. Knives are to be designed for cutting heavy brush up to 6" diameter. Weight is to be not less than 32 ounces each.

Cutter head to weigh at least 990 lbs.

Reference: To be equal to Alamo Model FML 100H.

OPTION 5 - Flail Type Brushcutter Head: Furnish flail type brushcutter head conforming to the following specifications.

The **cutter head** is to be interchangeable with the other optional heads. The **flail mower cutting head** is to be a hydraulically driven heavy duty unit with a cutting width of 44" minimum. It shall be capable of routinely cutting heavy brush up to 4" in diameter without equipment failure.

The housing and frame shall be fully welded steel construction, 3/16" deck and 3/8" end plates. The cutter shaft shall be not less than 4-1/2" diameter by 3/8" thick tube with solid stub ends mounted in minimum 2" diameter sealed double row ball bearings. The housing is to be designed to cover and protect the bearings' inner seal and be equipped with lubrication fittings. The roller shall be minimum 5-1/2" diameter full span with sealed bearings and lubrication fittings. The end plates shall have vertical braces with bottom skids and replaceable wear plates. The mower is to be equipped with a rear deflector curtain.

Knives are to be replaceable type, flexibly mounted to provide a folding action when hard objects are encountered and return to cutting position automatically when clear. Knives are to be designed for cutting heavy brush. Weight is to be not less than 32 ounces each.

OPTION 6 - Flail Type Grass Cutter Head: Furnish flail type grass cutter head conforming to the following specifications.

The cutter head is to be interchangeable with the other optional heads.

The **flail mower cutting head** is to be a hydraulically driven heavy duty unit with a cutting width of 60" minimum. It shall be capable of routinely cutting grass and light brush up to 1-1/2" in diameter without equipment failure.

The housing and frame shall be fully welded steel construction. The cutter shaft shall be not less than 4-1/2" tube with solid stub ends mounted in minimum 1-15/16" diameter sealed double row ball bearings. The housing is to be designed to cover and protect the bearings' inner seal and be equipped with lubrication fittings.

The roller shall be minimum 6" diameter full span with sealed bearings and lubrication fittings. The end plates shall have vertical braces with bottom skids and replaceable wear plates. It is to be equipped with a rear deflector curtain.

Knives are to be replaceable type, flexibly mounted to provide a folding action when hard objects are encountered and return to cutting position automatically when clear. Knives are to be designed for cutting grass and light brush. Weight is to be not less than 4 ounces each.

OPTION 7 - Sickle Type 4" Limb Cutting Head: Furnish sickle type limb cutting head conforming to the following specifications.

The cutter head is to be interchangeable with the other optional heads. The cutter head is to be a hydraulically operated sickle type mower designed for cutting tree limbs up to 4" diameter. Unit is to have a cutting width of 5'. Weight is to be at least 440 lbs.

To be equal to Alamo Timber Cat.

OPTION 8 - Circular Saw Limb Cutting Head: Furnish circular saw type limb cutting head conforming to the following specifications.

The cutter head is to be interchangeable with the other optional heads. The cutter head is to be a hydraulically operated multiple saw blades type designed for cutting tree limbs up to 4" diameter. Unit is to have a cutting width of 7-1/2'.

To be equal to Alamo BuzzBar.

OPTION 9 – Quick Coupler Attachment (Both Halves): Furnish quick coupler components (both halves) for both the mower head and the boom.

OPTION 10- Quick Coupler (Mower Head Half): Furnish quick coupler component for mower head only.